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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,624	07/17/2003	Christopher Anthony Kaminski	839-1186	9647

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EXAMINER

PRUCHNIC, STANLEY J

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/620,624	Applicant(s) KAMINSKI ET AL.	
	Examiner Stanley J. Pruchnic, Jr.	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/8/03 (1 sheet)</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-10, drawn to a method of measuring temperature, classified in class 374, subclass 161.
 - II. Claims 11-15, drawn to an apparatus for measuring temperature in stationary components of electrical machines, classified in class 374, subclass 152.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case:

- (1) The process as claimed can be practiced by another materially different apparatus, an apparatus not requiring the ribbon to be formed of a material with sufficient creep strength to support the optical fiber while preventing the optical fiber from being crushed, such as an adhesive tape; and
- (2) The apparatus as claimed can be used to practice another and materially different process, not requiring injecting laser pulses, such as an acoustic "hot spot" detection method.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with attorney ALAN KAGEN on 16 April 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 11-15. Applicant in replying to this Office action must make affirmation of this election. Claims 1-10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 11 is rejected under 35 U.S.C. 102(b) as being anticipated by BOSSELMANN *et al.* (U. S. Patent Application Pub. No. 2002/0196994 A1, hereinafter **BOSSELMANN'994**).

Regarding Claim 11: BOSSELMANN'994 discloses an apparatus (100; Fig. 1) for measuring temperature in stationary components of electrical machines (electrical generator 80; Paragraph [0045], the apparatus comprising an optical fiber 30 embedded in a non-metallic material ribbon, wherein notches (Paragraph [0019], "groove or notch") are formed (Paragraph [0055]) in the ribbon to accommodate bends in a stationary component, and wherein the ribbon is formed of a material (Paragraph [0051]) with sufficient creep strength to support the optical fiber while preventing the optical fiber from being crushed (Paragraph [0016]) as claimed by Applicant.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **BOSSELMANN'994** as applied to claim 11 above, and further in view of KLASS *et al.* (U. S. Patent No. 6,079,875, hereinafter **KLASS**).

To summarize, **BOSSELMANN'994** discloses or suggests all the limitations as claimed by Applicant in Claims 12-14, including the limitations of Claim 11 as described above in Paragraph 9, except that **BOSSELMANN'994**, as described above, does not disclose a sine wave configuration wherein the notches coincide with nodes of the sine wave as claimed by Applicant in Claims 12-13, and **BOSSELMANN'994** does not disclose a second ribbon and a corresponding second optical fiber as claimed by Applicant in Claim 14.

Regarding Claims 12-13: KLASS discloses an embedded fiber temperature sensor wherein the optical fiber is embedded in the ribbon in a sine wave configuration (Figs. 4-5 and 7; Col. 4, Line 35- Col. 5, Line 8). KLASS teaches this configuration is advantageous (Col. 5, Lines 4-8) for increasing the fatigue strength of the sensor 5. One of ordinary skill in the art of temperature measurement would have recognized the benefit of a sine wave configuration for increasing the fatigue strength of the sensor as taught by KLASS.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute a sine wave configuration for the straight

line configuration of **BOSSELMANN'994** in order to increase the fatigue strength of the sensor as taught by KLASS.

Further regarding Claim 13: **BOSSELMANN'994** already teaches the notches coincide with the entire length of the fiber, thus the notches coincide with the nodes of the sine wave when the fiber is in the shape configuration as taught by KLASS.

Regarding Claim 14: **BOSSELMANN'994** does not disclose a second ribbon and a corresponding second optical fiber as claimed by Applicant.

KLASS teaches using several fibers (Col. 5, Lines 22-25). One of ordinary skill in the art of temperature measurement would have recognized the benefit of monitoring the temperature over a greater area of the armature in order to more accurately detect a hot spot in the armature.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to add a second ribbon and a corresponding second optical fiber for the first ribbon and fiber of **BOSSELMANN'994** in order to more accurately detect a hot spot in the armature as suggested by KLASS.

13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over **BOSSELMANN'994**.

To summarize, **BOSSELMANN'994** discloses or suggests all the limitations as claimed by Applicant in Claim 15, including the limitations of Claim 11 as described above in Paragraph 9.

Further regarding Claim 15: **BOSSELMANN'994** discloses the apparatus wherein the stationary component is an armature bar 20 (rotor 20; Paragraph [0024]),

and a height (Paragraph [0053]) of the ribbon is recognized as being related to the height of the armature bar. But, **BOSSELMANN'994** does not explicitly describe the height of the ribbon is about one half a height of the armature bar as claimed by Applicant.

The limitations in this claim, wherein the ribbon is height is about one half a height of the armature bar, absent any criticality, are only considered to be the "optimum" range of the ribbon height disclosed by **BOSSELMANN'994**, that a person having ordinary skill in the art would have been able to determine using routine experimentation based, among other things, on the desired accuracy, manufacturing costs, etc. See *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to design the height of the ribbon to be about half the height of the armature in order to fit over the portion of the armature where the temperature is desired to be accurately measured while avoiding the outer edges where the ribbon could interfere with the operation of the machine.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the form PTO-892 and not mentioned above disclose related optical fiber temperature measurement devices and methods for measuring temperature in electrical machines.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanley J. Pruchnic, Jr., whose telephone number is **(571) 272-2248**. The examiner can normally be reached on weekdays (Monday through Friday) from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are

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unsuccessful, the examiner's supervisor, Diego F. F. Gutierrez can be reached at **(571) 272-2245**.


The **Official FAX** number for Technology Center 2800 is **(703) 872-9306** for **all official communications**.

Any inquiry of a general nature or relating to the status of this application or proceeding may be directed to the official USPTO website at **<http://www.uspto.gov/>** or you may call the **USPTO Call Center** at **800-786-9199** or 703-308-4357. The Technology Center 2800 Customer Service FAX phone number is (703) 872-9317.

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